

Work Order ID 69675

Monday, May 16, 2011 9:27:54 AM



Page 1

Item ID: D350-591-312

Accept



Setup Start



Revision ID:

Stop



Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Approvals:

Process Plan:

CL

Date:

11/05/16

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3272

Rev B

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and type labels as per PPP D350-591-312 CHG001

Sub 6/6/07

110

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8719, weld Fwd End Plate as per QSI 004 & Dwg D3272

A/R Aluminum Rod M114703
M115928

3-Grind End Plate flush

11.05.27

5
10

φ

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				5	0	820/05/31	
130 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							8 11/05/31
140 HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				X5RM	0	all 11/05/31	

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Start Date: 5/16/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150 QC3- Inspect Part Finish

0.00

11.06.02

5



QC

Memo

0.00

Quality Control

180

0.00

A.E. 11.06.02

5



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Assemble Leg Assembly as per Dwg D3272.

2-Leave one rivet out until welding is complete.

3-Bevel Aft end for welding

4-Inspect for foreign object as per QSI 024

5-Weld Aft End Plate as per QSI 004 & Dwg D3272
A/R ☐ Aluminum Rod ☒ 1114703

6-Grind End Plate flush

7-Install last rivet as per Dwg.

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Stop



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC10- Inspect visual per QS1004- ground welds

0.00

Sub 6/02



QC

Memo

Quality Control

200

QC5- Inspect part completeness to step on W/O

0.00

0.00

Sub 6/02



QC

Memo

Quality Control



210

Chemical Conversion Coat per QS1005 4.1

0.00

0.00



HandFinish

Memo

Hand Finishing

5X
RH

M/L 4/06/02

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Stop



Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME: 12:45

OVEN TEMPERATURE: 3200F

FINISH TIME: 1:15

0.00

SX ~~✓~~ M/L 11/06/06
RH

230

Wing Walk as per dwg QSI005 4.4 Batch

0.00



HandFinish

Hand Finishing

Memo

M/L 7315

0.00

S BL 11-6-7

240

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

S ~~✓~~ M/L 11/06/07

Work Order ID 69675

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Page 6

Item ID: D350-591-312

Accept



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Revision ID:

Stop



Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011 Start Qty: 5.00



Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

11/6/3 SF 52

260

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

Dulab

XJ
RH

270

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD350-591-312

Location: _____

RCUB

11/6/7 52

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Cust Item ID:

Required Date: 6/8/2011 Req'd Qty: 5.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11-06-7
(5)




Monday, May 16, 2011 9:27:51 AM

Page 1

**Required Date:** 6/8/2011

Required Qty: 5.00

fixe route seq in bom DD 10.04.28 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3272-1 		Manufactured	No			110	Each	20.0000	1	5		11.05.18	
Step													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA	<u>369295</u>			20		5			
					67709			10					
					69294			10					
D3067-1 		Manufactured	No			110	Each	155.0000	1	5		11.05.26	
End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				5					
					67582			5					
				WA016				150					
					<u>68214</u>			150		5			
D3219-1 		Manufactured	No			110	Each	204.0000	2	10		11.05.26	
Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				84					
					<u>68202</u>			84		10			
				WA017				120					
					68338			120					

Picklist Print

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Page 2

Work Order ID: 69675



Parent Item: D350-591-312



Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 5.00

Required Qty: 5.00

D3066-1 Manufactured No

180 Each

88.0000

2

10



Spacer



11.06.01

Location

Loc Qty

Loc Code

WA

88

68337

88

10

MS20600-AD4W4

Purchased

No

180

Each

1,808.000

16

80



Rivets



11.06.01

Location

Loc Qty

Loc Code

ST321

1803

116188

603

117364

1000

117601

200

20

WA018

5

116712

5

D3065-041

Manufactured

No

180

Each

38.0000

1

5



Step Leg Assembly Hi



11.06.01

Location

Loc Qty

Loc Code

WA

38

66149

0

67503

38

5

D3067-1

Manufactured

No

180

Each

155.0000

1

5



End Plate



11.06.01

Location

Loc Qty

Loc Code

WA

5

67582

5

WA016

150

68214

150

5

Monday, May 16, 2011 9:27:51 AM

Shop Packet Print

Page 2

Picklist Print

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Work Order ID: 69675

Parent Item: D350-591-312


Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 5.00

Required Qty: 5.00

AN3-35A	Purchased	No	250	Each	131.0000	2	10
							
Bolt							

Picklist Print

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Work Order ID: 69675



Parent Item: D350-591-312



Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 5.00

Required Qty: 5.00

875 AN5-36A Bolt Purchased No 250 Each 103.0000 2 SP 10

Location	Loc Qty	Loc Code
ST341	103	
117366	103	

875 D2618 Bushing Manufactured No 250 Each 90.0000 2 10 10 1669880 SP

Location	Loc Qty	Loc Code
ST019	90	
68249	90	

875 D2230-3 Lug Manufactured No 250 Each 212.0000 4 20 20

Location	Loc Qty	Loc Code
Return 2010	4	
62927	2	
63544	2	

ST476	208	
65050	48	
68246	160	

875 D2856-400 Abrasion Strip Manufactured No 250 f 179.2696 1.2 6 11/6/38 50

Location	Loc Qty	Loc Code
ST403	178.6	
68076	178.6	
ST409	0.6696	
63735	0.6696	

cut (2) D2856-400-720 as per dwg

→ merged into lot

Picklist Print

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Parent Item: D350-591-312



Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 5.00

Required Qty: 5.00

MS21042L3

Purchased

No

250

Each

2,247.000

2

10



Nut

Location

Loc Qty

Loc Code

ST300

2247

116391

11

116540

270

116549

766

117441

800

117601

400

AN4-13A

Purchased

No

250

Each

245.0000

8

40



Bolt

Location

Loc Qty

Loc Code

ST357

245

117628

245

MS21042L5

Purchased

No

250

Each

1,275.000

2

10



Nut

Location

Loc Qty

Loc Code

ST300

1275

116105

315

116548

260

117441

500

117591

100

117611

100

Picklist Print

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Page 6

Work Order ID: 69675

Parent Item: D350-591-312

Parent Item Name: Heli-Access-Step, Long RH

Start Date: 5/16/2011

Required Date: 6/8/2011

Start Qty: 5.00

Required Qty: 5.00

MS21042L4

Purchased

No

250

Each

4,957.000

8

40



Nut

Location

Loc Qty

Loc Code

ST300

4957

114718

2

116823

1155

117441

3000

117601

800

AN960JD10

NAS1149D0363J

Purchased

No

250

Each

0.0000

4

20



Washer

Handwritten notes: 40, 116585, 11613, 5/15/11



DESIGN <i>GP</i>	DRAWN BY <i>B</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LE</i>	APPROVED <i>H</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED

07 06 04 *H*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

GENERAL NOTES:

- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

CL11/05/16
W10: 69675

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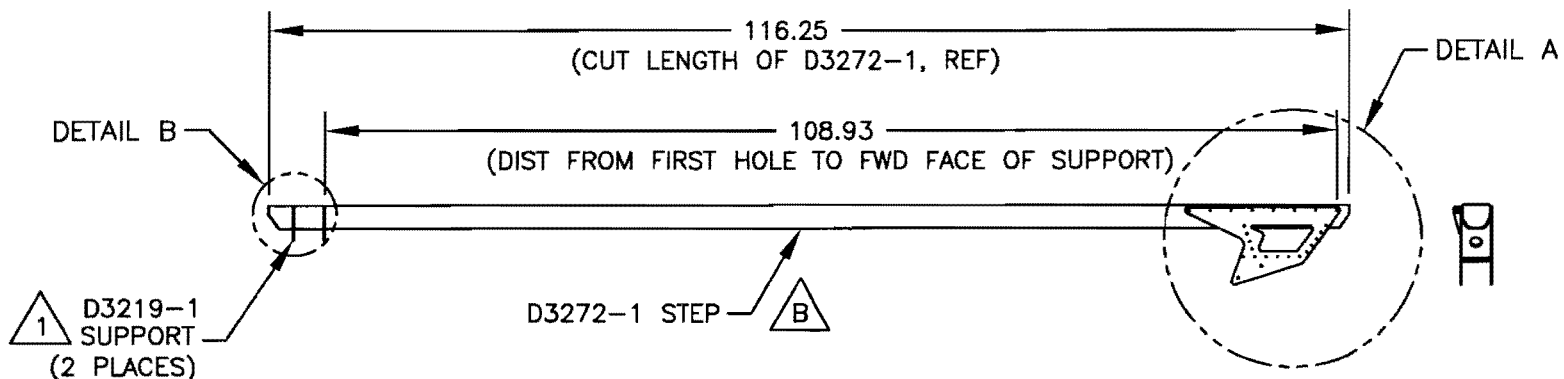
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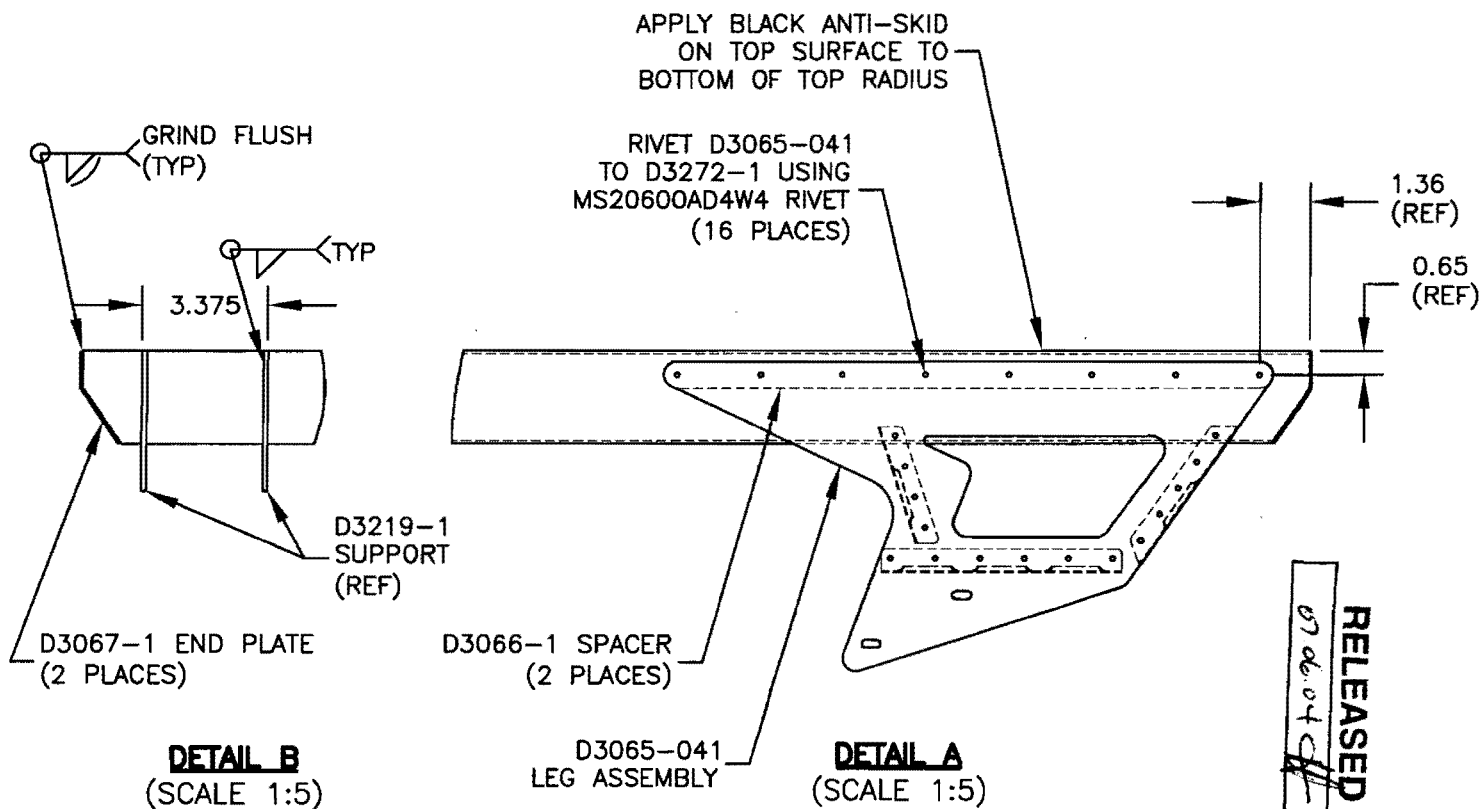
5



DESIGN	DRAWN BY	DART AEROSPACE LTD		
00	00	HAWKESBURY, ONTARIO, CANADA		
CHECKED 00	APPROVED 00	DRAWING NO. D3272	REV. E.A.	
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SHEET 2 OF 3	SCALE 1:20



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)

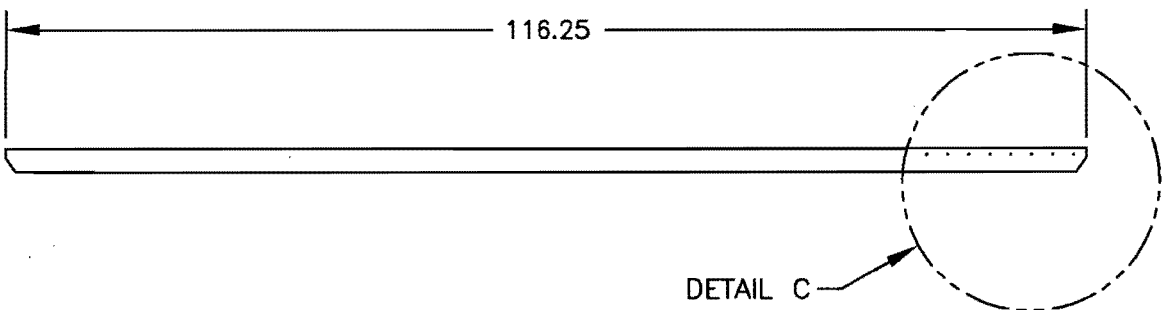


RELEASED
07.06.04

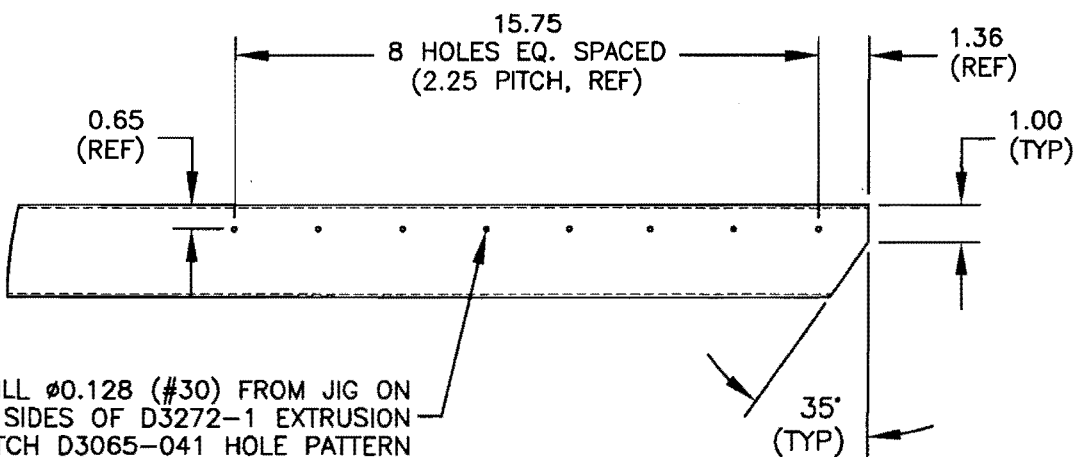
11. 11. 11.

DART

DESIGN	<i>CP</i>	DRAWN BY	<i>JS</i>	DART AEROSPACE LTD
CHECKED	<i>CE</i>	APPROVED	<i>JS</i>	HAWKESBURY, ONTARIO, CANADA
DATE	07.05.18	DRAWING NO.	D3272	REV. B
		TITLE	STEP ASSEMBLY, HI LONG	SHEET 3 OF 3
		SCALE	1:20	



△ B D3272-1 STEP
(MAKE FROM D2622-120 STEP EXTRUSION)



DRILL $\varnothing 0.128$ (#30) FROM JIG ON BOTH SIDES OF D3272-1 EXTRUSION TO MATCH D3065-041 HOLE PATTERN

DETAIL C
(SCALE 1:5)

RELEASED
07.06.04

Qty -211	Qty -212	Qty -213	Qty -214	Qty -215	Qty -216	Qty -311	Qty -312	Part Number	Description
X								D350-591-211	<i>Heli-Access-Step</i> ™, Long Step – High Skid, LH
	X							D350-591-212	<i>Heli-Access-Step</i> ™, Long Step – High Skid, RH
		X						D350-591-213	<i>Heli-Access-Step</i> ™, Short Step – High Skid, LH
			X					D350-591-214	<i>Heli-Access-Step</i> ™, Short Step – High Skid, RH
				X				D350-591-215	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, LH
					X			D350-591-216	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, RH
						X		D350-591-311	<i>Heli-Access-Step</i> ™, Long Step – High Skid, LH
							X	D350-591-312	<i>Heli-Access-Step</i> ™, Long Step – High Skid, RH
1								D3070-041	STEP ASSEMBLY (HIGH-LONG, LH)
	1							D3070-042	STEP ASSEMBLY (HIGH-LONG, RH)
		1						D3078-041	STEP ASSEMBLY (HIGH-SHORT, LH)
			1					D3078-042	STEP ASSEMBLY (HIGH-SHORT, RH)
				1				D3168-041	STEP ASSEMBLY (LOW-SHORT, LH)
					1			D3168-042	STEP ASSEMBLY (LOW-SHORT, RH)
						1		D3272-041	STEP ASSEMBLY (HIGH-LONG, LH)
							1	D3272-042	STEP ASSEMBLY (HIGH-LONG, RH)
4	4							D2182B035	RUBBER CUSHION
		2	2	2	2			D2230-1	MOUNTING LUG
		2	2	2	2	4	4	D2230-3	MOUNTING LUG
8	8							D2274	RADIUS BLOCK
						2	2	D2618	BUSHING
4	4	4	4	4	4			D2732-030	CUSHION
2	2	1	1	1	1	2	2	D2856-400-720	ABRASION STRIP
2	2							D3064-1	CLAMP
1	1							D3079-041	SUPPORT ASSEMBLY
4	4							D3080-1	CLAMP
						2	2	D3235-1	MOUNTING LUG
						1	1	D3278-041	SUPPORT ASSEMBLY
2	2	2	2	2	2	2	2	AN3-35A	BOLT
10	10	2	2	2	2			AN4-11A	BOLT
		4	4	4	4	8	8	AN4-13A	BOLT
						2	2	AN5-36A	BOLT
4	4	4	4	4	4	4	4	AN960JD10	WASHER
20	20	12	12	12	12	16	16	AN960JD416	WASHER
						4	4	AN960JD516	WASHER
2	2	2	2	2	2	2	2	MS21042L3	NUT
10	10	6	6	6	6	8	8	MS21042L4	NUT
						2	2	MS21042L5	NUT
						1	1	*DSI 9410-011	STEP MODIFICATION KIT

*DSI 9410-011 Step Modification Kits are provided with all D350-591-311 and D350-591-312 Steps. This kit is provided as an option for the installer and is therefore **NOT REQUIRED** to complete the installation of the D350-591-311 or D350-591-312 Steps. Refer to Figure 21 for installation of the DSI 9410-011 Kit.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries